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ABSTRACT

The present study was generated by the desire to find out more about the attitudes toward school held by inner-city children, using an attitude survey. It was hoped that revisions of methodology for the survey would avoid the "white psychologist's fallacy." It was found that some students felt that learning was a pleasurable experience, that some students were "turned-off," and that schools contribute to the "turning-off" process. (DM)

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School-Related Attitudes of Inner-City Junior High Students

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Paper presented at annual meeting

American Educational Research Association

New Orleans, Louisiana

February, 1973

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Although it has been widely assumed that "disadvantaged" children hold negative self-concepts about themselves, more recent investigations (Banks & Grambs, 1972; Baughman, 1971; Trowbridge, 1972; and Zirkel, 1971) have shown this assumption to be erroneous. It appears most likely that the earlier investigators were guilty of the "White Psychologist's Fallacy" because of their misunderstanding of cultural differences.

The "White Psychologist's Fallacy" occurs when middle-class (mostly white) professional, academically-oriented persons try to examine the behavior of a culturally different group while forgetting that their observation has become part of the immediate environment and influences (sometimes quite strongly) the behavior under observation. Another aspect of this fallacy is the false assumption that cultural differences in language, cognitive style, or social interaction are really deficits leading to a "disadvantage" because other cultures are not like the middle-class (see Labov, 197 , and Ginsburg, 1972).

The early studies were largely done in a school-context and therefore were more a reflection of the academic self-concept of the student than of his general self-concept. In addition, the early studies were performed by white psychologists who, for the most part, were not sensitive to the affective strain inherent in a situation consisting of a white professional in a dominant position over culturally

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Mr. Delos Craft assisted in the collection of the data.

different young people.

The present study is not actually a self-concept study, but it was generated by the desire to find out more about the attitudes toward school held by inner-city children. This was in response to the confusion of academic and general self-concept found in earlier investigations. Since a "partial" self-concept consists of specific and generalized attitudes about oneself in some specific circumstances, it was decided to administer an attitude survey concerning school to inner-city youth. It was also hoped that revisions of methodology for administering the survey would avoid the "White Psychologist's Fallacy". Finally, it was decided to analyze the data by a factor analytic strategy originated by Harris and Harris (1971) and refined by Hofmann (1972) in order to emerge with the soundest possible description of attitudes held by the students assessed.

Methods

Administration of the attitude survey. One practice leading to the "White Psychologist Fallacy" is when a white professional person enters the school and administers a written or oral instrument which has all the overtones of being a "test". This practice elicits the avoidance behaviors of the students rather than their attending behaviors since the students are ignorant of the true purpose of the "test" and are probably more afraid of revealing

themselves than of doing poorly. In other words, inner-city children will try to "play a game" on the white psychologist since they do not have the middle-class orientation of respecting and obeying authority. Two methods were used to avoid "having a game played on us". First, the instrument contained only 27 items (see Table 1) to avoid the appearance of a lengthy test. Secondly, the instrument was administered by a former teacher currently serving as the director of a "Crisis Center" room for students who were asked to leave class but for whom normal channels of discipline through the assistant principal appeared to be too severe. He is black, and informal questioning revealed that he was considered a friend rather than a foe of the students. To avoid the language differences as much as possible, all items were screened by an inner-city youth now attending college through a Career Opportunity Program.

There were 160 junior high school students in the 7th, 8th, and 9th grades, including 11 from a Special Education class (EMH). It was decided to use junior highs in order to sample a stable attitude structure because of the years of school experience and to avoid the high drop-out rate of the high school years. The school is in Cincinnati, Ohio, and is located near two large housing projects for welfare recipients and others with low-income. Approximately 80% of the students in attendance (enrollment

is 1000) are on welfare; and the racial split is about 80% black, 20% white. The majority of white students are from Appalachian culture families. The students were not asked to give much personal information about themselves (race was excluded) because tension is high between whites and blacks, and the students and their parents are extremely sensitive to any indication of discrimination, preferential treatment, or prejudice. Questions concerning race or welfare status would have seemed too much like snooping into their lives and would only elicit avoidance or "game-playing" behaviors.

The survey was taken into a class by the Crisis Center Director. He assured the students that their responses would not be used against them in any way. When each class finished, the surveys were sealed in an envelope to maintain this set, which was considered important because previous experience had shown that inner-city young people are very suspicious of such a "psychoanalysis" and feel that it will be used to their detriment. The gain in validity in terms of "truthful" responses by the students compensates for the lack of precision in administration procedures and the loss of some statistical information.

Factor analytic interpretation strategy. Recent discussions of the strategy for interpreting factor analysis studies (Harris & Harris, 1971; Hofmann, 1972) have stressed the necessity of utilizing multiple solutions in order

to define "robust" factors and avoid the including of non-relevant variables in the factors. Three factoring methods were used: alpha analysis (Kaiser & Caffrey, 1965), incomplete image analysis (Harris, 1962), and incomplete components analysis (Hotelling, 1933). Each of these three initial solutions was transformed by two separate procedures: Kaiser's (1958) normal varimax transformation giving an orthogonal solution, and Hofmann's (1970) obliquimax transformation yielding the oblique, primary pattern solution. Thus there were six distinct analyses used for the determination of the robust factors. Following Hofmann (1972) it was decided that a variable would be considered to help define a factor if it emerged in two of the three solutions for each of the transformational procedures. Also, the level for concluding a variable to be contributory was set at .25, instead of the more usual .30, because this level yielded fewer "close calls" and appeared to be a more discriminating criterion (Hofmann, 1972).

Results

Of the 27 items on the survey instrument, 24 were first-person statements scored by a 5-point Likert-scale which ranged "mostly yes", "sometimes yes", "in-between", "sometimes no", and "mostly no". The remaining three items concerned the student's class, size of family, and ordinal position in the family. The percentage of answers

for each category of the attitude items and the raw data for the statistical items are found in Table 1.

Table 1 about here

The factor analysis strategy gave the results shown in Table 2.

Table 2 about here

The relevant variables for each factor are in capital letters (shortened versions) and the non-relevant variables in small letters. The intercorrelations of the oblique factors are given for each of the three methods in Table 3.

Table 3 about here

Each of the factors will be discussed separately. For each relevant variable defining that factor, the loadings will be given for each of the six solutions according to this key:

A - incomplete image analysis, varimax transformation
B - Alpha analysis, varimax transformation
C - incomplete components analysis, varimax transformation
D - incomplete image analysis, obliquimax transformation
E - Alpha analysis, obliquimax transformation
F - incomplete components analysis, obliquimax transformation.

Factor One -- "Classroom Atmosphere"

A	B	C	D	E	F		
55	62	73	57	63	75	(#7)	I like most of my teachers because they are nice to me.
60	70	80	66	74	84	(#10)	My teachers answer my questions when I ask them.
47	52	48	48	52	43	(#11)	Sometimes my teachers will admit it when they make a mistake.

A	B	C	D	E	F	
40	42	47	40	39	45	(#13) My teachers ask for my feelings about things in class.
56	63	69	55	62	67	(#15) My teachers make learning things fun.
47	40	52	41	29	47	(#18) I like the subjects we study in school.
33	38	36	34	38	34	(#20) My parents have come to school before to talk with my teachers about grades that I make.

Of the seven defining variables for this factor, five (#'s 7, 10, 11, 13, 15) are concerned with the teacher's attitude and manner of interaction with the students. The sixth variable (#18) is a reflection of the student's liking for the school subjects his is studying, and the last variable (#20) indicates whether the student's parents have come to school to discuss grades with the teacher. These variables seem to indicate an attitude about the atmosphere of the classroom and the humaneness of the teacher. The inclusion of variable 20 concerning the parents' participation in conferences about grades may well be a reflection of the teacher's positive attitude toward the students and whether or not the teacher makes an effort to contact the home and invite the parents to come.

Factor Two -- "Involvement"

A	B	C	D	E	F	
38	41	75	41	40	79	(#3) Most of my friends think school is a waste of time.
35	43	57	38	44	56	(#9) Sometimes I get very bored in class and even fall asleep.
46	61	65	46	60	62	(#14) I think some of my teachers like to pick on me.
32	36	40	29	33	38	(#24) My teacher tries to make me be like her.

One of the defining variables (#3) for this factor concerns the student's interaction with his peers. It

was included as an attempt to find the attitude structure toward school without making a direct statement, and apparently was successful. If a student said his friends thought school to be a waste of time, that student also said that he gets bored and even falls asleep (#9). This student also feels somewhat persecuted by the teacher (#14) and feels that the teacher is trying to make his behavior conform to that of the teacher (#24). These variables all concern the degree to which the student has committed himself to the schooling process and the degree of personal involvement or non-involvement he feels in that process.

Factor Three -- "Approach/Avoidance"

A	B	C	D	E	F		
49	68	69	46	68	66	(#4)	A good education is important to me.
36	59	81	31	58	82	(#5)	My parents like for me to do my homework all the time.
28	37	53	(23)	30	50	(#11)	Sometimes my teachers will admit it when they make a mistake.

These variables seem to indicate whether or not the student has a broad, positive (or negative) attitude toward the entire schooling process. This broadness and generality is indicated by the scope of the three variables, because they encompass education in general, parents and homework, and teachers and their humaneness.

Factor Four -- "External Control"

A	B	C	D	E	F		
28	47	76	30	46	77	(#8)	In school we have to sit in straight rows and be quiet all the time.
36	51	67	37	51	66	(#16)	My parents punish me a lot at home.

The two variables defining this factor concern

situations where the student's behavior is controlled by forces outside himself. In variable 8 the student has indicated whether or not he must conform to fairly rigid behavior standards, and in variable 16 he has indicated the degree of parental punishment inflicted upon him.

Factor Five -- "Family Structure"

A	B	C	D	E	F	
40	60	80	40	59	80	(#26) Numerical size of family.
39	60	80	40	60	80	(#27) Ordinal position of child in family.

Both defining variables have to do with the constellation of the family.

Factor Six -- "School Class"

A	B	C	D	E	F	
36	54	93	38	55	93	(#25) Class in school.

This factor was the only specific (single variable) one.

Factor Seven -- "Learn for Fun"

A	B	C	D	E	F	
32	42	--	31	41	--	(#2) My brothers' and sisters' friends tease me about being a good student in school.
39	48	80	41	48	81	(#21) I like to study at home because it is quiet.
37	57	53	33	57	48	(#22) During the summer I like to read about things that interest me.
33	43	39	30	43	36	(#24) My teacher tries to make me be like her.

Variable 2 indicates whether or not the student gets teased by others for being a good student, an indication of the social context of his attitude toward schooling. Variables 21 and 22 indicate the student's interest in studying at home and in reading during the summer, activities which he could avoid if he wished. Therefore a positive

response to these variables indicates that learning is fun. The remaining variable (#24) was also relevant for Factor Two--"Involvement". In this context it appears to indicate that being like the teacher is a positive value if you are a good student, and a negative value if you are a poor or disinterested student.

Factor Eight -- "Athlete's Affect"

A	B	C	D	E	F		
--	32	58	--	28	58	(#13)	My teachers ask for my feelings about things in class.
32	58	83	31	57	84	(#19)	Sports interest me more than school does.

The two defining variables for this factor seem very dissimilar. One (#13) is whether or not teachers ask for the student's feelings about things (also relevant to Factor One--"Classroom Atmosphere") and the other is whether or not sports are more interesting than school. One possible interpretation is that those students who are more interested in sports than academics are less threatened by teachers and manage to engage in friendly conversation with them.

Factor Nine -- "Goal Orientation"

A	B	C	D	E	F		
--	51	83	--	52	84	(#1)	My parents get very upset when I stay home from school or play hookey.
--	46	42	--	38	36	(#6)	I would like to finish high school.

These two defining variables can be interpreted to mean that the student has some impetus from home and long-range goal orientation toward completing schooling. It is interesting to note that it is in fact the home/parent variable which is linked with the desire to finish high school.

Factor Ten -- "Dissonance"

A	B	C	D	E	F		
--	46	56	--	45	57	(#6)	I would like to finish high school.
--	56	79	--	55	78	(#12)	When I go to school I like breaks and lunch period the best.

Variable 6 (desire to finish high school) is relevant to this factor as well as Factor Nine--"Goal Orientation". Although variable 12 seems contradictory to variable 6, they can be interpreted as meaning that many students are in a kind of approach-avoidance conflict about being in the school. That is, the student is caught in the dissonance of knowing the value of that high school diploma but he finds the classes he must sit through much less interesting than the social life of breaks and lunch. Since about 75% of the students participate in the free lunch program, it is also true that they have pragmatic reasons for likeing to eat--they need the food.

To summarize:

Factor 1 -- "Classroom Atmosphere"
Factor 2 -- "Involvement"
Factor 3 -- "Approach/Avoidance"
Factor 4 -- "External Control"
Factor 5 -- "Family Structure"
Factor 6 -- "School Class"
Factor 7 -- "Learn for Fun"
Factor 8 -- "Athlete's Affect"
Factor 9 -- "Goal Orientation"
Factor 10 -- "Dissonance"

Little useful information was gained from the correlations between factors for two reasons. First, the irrelevant, extranaeous variables disturbed the uniqueness of the factors, and the solutions were distributing that extranaeous

variance in differing fashion. The result was that there was no consistent correlation pattern across the six solutions. Second, the squared partial correlations tended to be low, which depressed the sampling efficiency.

Conclusions

There is no doubt that inner-city youth have well-established attitudes about themselves and their school experiences by the time they reach the junior high level. Several of the factors which emerged from this analysis show definite attitudes toward school itself, attitudes which are positive for at least some of the students. "Classroom Atmosphere" (One) is an attitude about the teachers and the kinds of interactions taking place within those classrooms, while "Learn for Fun" (Seven) demonstrates the presence in some of the students of feelings that learning is a pleasurable experience. Therefore it is certainly incorrect to assert that all inner-city youth have negative academic self-concepts.

The most interesting factor is "Dissonance" (Ten). Its combining of the desire to finish high school (expressed by 82.1% of the students) with a liking for lunch and class breaks is a familiar one to most ex-students in light of the boredom and irrelevance associated with most classroom activities. What makes it surprising is the long-held assumption that inner-city (i.e., Black and White Appalachian)

youth do not value education and would just as soon be elsewhere. These young people do seem to want an education, probably (in part) for very pragmatic reasons having to do with jobs and as a means of escape from poverty and welfare. But the realistic expectation is that approximately one-half of the students sampled will not, in fact, graduate from high school. But rather than placing all the blame on the students, their attitudes, or their cultural pressures in terms of not valuing education as a goal, it would seem just as plausible to draw another conclusion. Namely, that the schools contribute just as much to the "turning-off" process as the students do.

"Involvement" (Two) suggests that, at least for some students, "turned-off" learner is the correct label. They are not interested in, let alone excited about, what goes on in their school. They are already dropping-out psychologically if not physically, and it is probably only the police officer on the school grounds who prevents their total disappearance from school. Is it their fault that they are not involved in the life and activities of the school? the school's fault? their culture's fault? the fault of peer pressure? the fault of a materialistic society to which they have been denied access? the fault of bored teachers? the fault of sadistic and/or insensitive administrators? To say that the fault is shared among all these is to reduce the problems of inner-city education to irrelevance by

spreading the blame so thin that no one has to feel any responsibility. Yet the fact remains that only 32.8% of the students said that their teachers make learning things fun, and the attitudes of "(Non-)Involvement" and "Dissonance" do exist among these students. Certainly the schools cannot escape their share of responsibility for the attitudes held by the students who have participated in those schools for many years. The turned-off learner has learned...that school is not likely to be very interesting.

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Table I

Per cent of Responses for Each Category

on Attitude Items and Raw Data on Personal Items

Mostly Yes	Sometimes Yes	In-Between	Sometimes No	Mostly No	
49.4	14.9	10.3	3.0	17.9	1. My parents get very upset when I stay home from school or play hookey.
10.1	12.5	4.8	14.3	54.2	2. My brothers' and sisters' friends tease me about being a good student in school.
33.3	17.9	13.7	7.7	20.8	3. Most of my friends think school is a waste of time.
63.7	13.1	6.5	3.0	8.3	4. A good education is important to me.
55.4	14.9	7.7	3.0	13.1	5. My parents like for me to do my homework all the time.
71.4	10.7	1.8	3.0	7.7	6. I would like to finish high school.
23.2	17.3	19.0	7.1	29.2	7. I like most of my teachers because they are nice to me.
23.2	18.5	14.3	11.9	26.2	8. In school we have to sit in straight rows and be quiet all the time.
42.9	22.0	6.0	4.2	18.5	9. Sometimes I get very bored in class and even fall asleep.
33.9	15.5	19.0	6.5	19.0	10. My teachers answer my questions when I ask them.
38.7	16.1	10.7	7.1	21.4	11. Sometimes my teachers will admit it when they make a mistake.
44.6	20.2	9.5	4.8	14.9	12. When I go to school I like breaks and lunch period the best.
17.9	15.5	13.7	9.5	36.9	13. My teachers ask for my feelings about things in class.
19.6	13.1	10.1	7.7	44.0	14. I think some of my teachers like to pick on me.

Table I Continued

17.9	14.9	18.5	8.3.	34.5	15. My teachers make learning things fun.
11.3	10.7	7.7	10.7	48.8	16. My parents punish me alot at home.
16.1	8.9	17.3	10.1	41.1	17. I think that the vice-principal likes me.
19.0	16.1	23.2	7.7	23.2	18. I like the subjects we study in school.
34.5	10.7	13.7	5.4	28.6	19. Sports interest me more than school does.
14.3	11.3	8.9	7.1	51.2	20. My parents have come to school before to talk with my teachers about grades that I make.
17.9	10.1	19.6	6.5	39.3	21. I like to study at home because it is quiet.
32.1	12.5	10.7	4.8	29.8	22. During the summer I like to read about things that interest me.
20.8	11.3	21.4	11.9	28.6	23. My teachers won't pay any attention to me when I ask them questions or make suggestions.
13.1	13.7	8.9	5.4	51.2	24. My teachers tries to make me be like her.

7th:	8th:	9th:	SpEd:
23	96	30	11

25. Numerical class or respondent.

#	f	#	f
1	2	6	20
2	5	7	31
3	15	8	20
4	22	9	29
5	16		

26. Numerical size of family.

Only child: 4
Oldest child: 21
Beginning of family: 25
Middle of family: 57
End of family: 37
Youngest; 16

27. Ordinal position of family.

KEY: A - Incomplete image analysis, varimax transformation
B - Alpha analysis, varimax transformation
C - Incomplete components analysis, varimax transformation
D - Incomplete image analysis, obliquimax transformation
E - Alpha analysis, obliquimax transformation
F - Incomplete components analysis, obliquimax transformation

TABLE 2 - FACTOR ANALYSIS

Variable	Factor	Condensed Statement	Varimax A	Varimax B	Varimax C	Obliquimax D	Obliquimax E	Obliquimax F
7	1	LIKE TEACHERS, NICE TO ME	55	62	73	57	63	75
10		TEACHERS ANSWER QUESTIONS	60	70	80	66	74	84
11		TEACHERS ADMIT MISTAKES	47	52	48	48	52	43
13		TEACHERS ASK FOR FEELINGS	40	42	47	40	39	45
15		TEACHERS MAKE LEARNING FUN	56	63	69	55	62	67
18		I LIKE SUBJECTS STUDIED	47	40	52	41	29	47
20		PARENTS COME...GRADES	33	38	36	34	38	34
5		parents like me to do homework	26	--	--	--	--	--
17		think vice-principal likes me	25	--	--	--	--	--
22		like to read in summer	25	--	--	--	--	--
3	2	FRIENDS SAY SCHOOL WASTE OF TIME	38	41	75	41	40	79
9		GET BORED, FALL ASLEEP	35	43	57	38	44	56
14		TEACHERS LIKE TO PICK ON ME	46	61	65	46	60	62
24		TEACHER MAKES ME LIKE HER	32	36	40	29	33	38
12		like breaks and lunch best	32	26	--	30	--	--
18		I like subjects studied	--	-25	--	--	-26	--
19		sports more interest than school	25	28	--	--	--	--

TABLE 2 - FACTOR ANALYSIS (CONTINUED)

Variable	Factor	Condensed Statement	Varimax A	Varimax B	Varimax C	Obliquimax D	Obliquimax E	Obliquimax F
4	3	GOOD EDUCATION IMPORTANT TO ME	49	68	69	46	68	66
5		PARENTS LIKE ME TO DO HOMEWORK	36	59	81	31	58	82
11		TEACHERS ADMIT MISTAKES	28	37	53	(23)	30	50
1		parents upset when home or hookey	31	--	--	37	--	--
6		like to finish high school	46	--	25	47	--	--
9		get bored, fall asleep	--	--	--	--	--	26
21		like to study at home...quiet	--	27	--	--	28	--
24		teacher makes me like her	--	--	-27	--	--	-30
8	4	SIT IN ROWS AND BE QUIET	28	47	76	30	46	77
16		PARENTS PUNISH AT HOME	36	51	67	37	51	66
14		teachers like to pick on me	--	--	27	--	--	--
17		think vice-principal likes me	--	29	--	--	29	--
20		parents come...grades	--	--	38	--	--	36
23		teachers won't pay attention to questions	26	25	--	--	--	--
26	5	SIZE OF FAMILY	40	60	80	40	59	80
27		ORDINAL POSITION	39	60	80	40	60	80
20		parents come...grades	--	26	--	--	27	--
25	6	CLASS	36	54	93	38	55	93
18		I like subjects studied	--	-28	--	--	-29	--
24		teacher makes me like her	--	25	27	--	--	--

TABLE 2 - FACTOR ANALYSIS (CONTINUED)

Variable	Factor	Condensed Statement	Varimax A	Varimax B	Varimax C	Obliquimax D	Obliquimax E	Obliquimax F
2	7	TEASED ABOUT BEING GOOD STUDENT	32	42	--	31	41	--
21		LIKE TO STUDY AT HOME...QUIET	39	48	80	41	48	81
22		LIKE TO READ IN SUMMER	37	57	53	33	57	48
24		TEACHER TRIES TO MAKE ME LIKE HER	33	43	39	30	43	36
4		good education important to me	--	--	29	--	--	27
6		like to finish high school	--	28	--	--	29	--
11		teachers admit mistakes	--	--	-28	--	--	-38
13		teachers ask for feelings	--	30	--	--	--	--
18		I like subjects studied	--	31	41	--	--	37
23		teachers won't pay attention to questions	25	38	--	--	36	--
13	8	TEACHERS ASK FOR FEELINGS	--	32	58	--	28	58
19		SPORTS MORE INTEREST THAN SCHOOL	32	58	83	31	57	84
7		like teachers, nice to me	--	--	--	--	--	25
20		parents come...grades	--	--	26	--	--	--
24		teacher makes me like her	--	--	28	--	--	--
1	9	PARENTS UPSET WHEN HOME OR HOOKEY	--	51	83	--	52	84
6		LIKE TO FINISH HIGH SCHOOL	--	46	42	--	38	36
3		friends say school waste of time	--	--	30	--	--	31
9		get bored, fall asleep	--	--	-37	--	--	-39
6	10	LIKE TO FINISH HIGH SCHOOL	--	46	56	--	45	57
12		LIKE BREAKS AND LUNCH BEST	--	56	79	--	55	78
18		I like subjects studied	--	--	-27	--	--	-27

TABLE 2 - FACTOR ANALYSIS (CONTINUED)

Factor			Varimax			Obliquimax		
Variable		Condensed Statement	A	B	C	D	E	F
2	11	teased about being good student	--	--	74	--	--	73
15		teachers make learning fun	--	--	25	--	--	--
16		parents punish at home	--	--	-31	--	--	-37
18		I like subjects studied	--	--	--	--	--	-29
20		parents come...grades	--	--	34	--	--	30
24		teacher makes me like her	--	--	30	--	--	26
9	12	get bored...fall asleep	--	--	38	--	--	40
16		parents punish at home	--	--	28	--	--	--
20		parents come...grades	--	--	-31	--	--	-37
22		like to read in summer	--	--	36	--	--	32
23		teachers won't pay attention to questions	--	--	79	--	--	78
9	13	get bored...fall asleep	--	--	-26	--	--	-26
17		think vice-principal likes me	--	--	87	--	--	87

Table 3

Oblique Factor Intercorrelations

		1	2	3	4	5	6	7	8	9	10
1	A										
	B										
	C										
2	A	-13									
	B	16									
	C	-10									
3	A	40	-04								
	B	33	-10								
	C	23	-02								
4	A	20	36	01							
	B	15	22	-02							
	C	06	17	-05							
5	A	-05	-06	11	-09						
	B	00	03	-04	04						
	C	-02	-02	13	-02						
6	A	12	12	-07	24	-07					
	B	01	-09	-12	09	01					
	C	02	00	-06	05	-03					
7	AA	43	15	27	44	-14	34				
	B	34	02	19	24	05	10				
	C	23	02	13	09	04	05				
8	A	01	36	-12	23	-06	32	29			
	B	09	25	-06	16	04	15	22			
	C	09	18	-05	09	-05	08	11			
9	A	--	--	--	--	--	--	--	--		
	B	08	-01	26	04	-10	-05	18	01		
	C	-01	-02	16	01	06	-01	08	-01		
10	A	--	--	--	--	--	--	--	--	--	
	B	-01	19	09	04	-04	01	04	03	18	
	C	-- -01	14	06	05	02	01	01	05	06	

A: Incomplete Image Analysis---Obliquimax transformation

B: Alpha Analysis---obliquimax transformation

C: Incomplete Components Analysis---Obliquimax transformation